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The Diffusion of Military Technologies to Foreign Nations

Arms Transfers Can Preserve the Defense Technological and Industrial Base

WILLIAM J. DELGREGO, MAJOR USAF

School of Advanced Airpower Studies

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Abstract

The purpose of this paper is to recommend that the United States government maintain the defense technological and industrial base (DTIB) by aggressively supporting the US defense industry in the arms transfer process. Ironically, this recommendation is contrary to the position held at the onset of this research and analysis effort. It is written for the microlevel reader (the young pilot, tank operator, etc.), the macrolevel reader (US government staffers and above in the State and Defense departments), and senior government officials (generals, congressmen, and senators) to inform and enhance their ability to understand the DTIB and how arms transfers can help in its preservation.

To accomplish this purpose, this paper has three aims. First, it recognizes that the DTIB requires preservation. With the end of the cold war and the continuing drawdown of US military forces and equipment, the DTIB is deteriorating. In this author's view, this decline can only be arrested with the help of the US government.

Second, it describes arms transfers as an instrument of foreign policy based on US national security interests and the foreign policy challenges of the day. The history of arms transfers is broken down into four periods, between 1945 and the present, to demonstrate this assertion. It predicts arms transfers will continue to be an instrument of foreign policy and can be used to enhance our DTIB.

Third, it focuses on the current arms transfer decision-making process and represents it as a "Labyrinth of Control." This section of the paper demonstrates the maze of controls used to adequately ensure that US military technologies are not diffused to foreign nations. A common but misguided view is that the US is selling its technological superiority through arms sales. In reality, the US can sell a technological *product* while maintaining control of related technological *processes*. Arms transfers can enhance supporting technologies by preserving the DTIB through ongoing and continuous production. It suggests the US government, especially the Department of State and Department of Defense, review, streamline, and liberalize arms transfer procedures.

In conclusion, this paper recommends that the US government support industry by becoming actively involved in the arms transfer process. Offsets and coproduction agreements must be understood by US officials in negotiations with foreign nations. By allowing the transfer of US military weapon systems in their export version, the DTIB can be maintained without any loss in technological superiority. This paper shows the US government can maintain the DTIB by actively and aggressively supporting industry in the arms transfer process.

About the Author

Maj William J. DelGrego was commissioned in 1981 through the Reserve Officer Training Corps at the University of Connecticut. Graduating from undergraduate pilot training in 1982, he went on to fly F-4D/E/Gs as a flight lead and instructor pilot. In 1986, he graduated from the USAF Fighter Weapons School. He was subsequently selected to transition into the F-15E Strike Eagle serving in Seymour Johnson Air Force Base's (AFB), North Carolina, "Initial Cadre" as one of the first operational instructors. A senior pilot with over 2,600 hours in fighters, he was the recipient of Tactical Air Command's Instructor Pilot of the Year Award in 1991. After an F-15E instructor tour at Luke AFB, Arizona, Major DelGrego attended Air Command and Staff College graduating with distinguished graduate honors. Upon graduation from the School of Advanced Airpower Studies, he was assigned to Headquarters AIR SOUTH at COMAFSOUTH, Naples, Italy. Major DelGrego is married to the former Christina M. Windish, and they have two daughters, Mary and Ashley.

Acknowledgments

I am grateful to Dr (Lt Col) Maris ("Buster") McCrabb, professor of economics, School of Advanced Airpower Studies (SAAS), who guided, prodded, and gave me the opportunity to pursue this research in my own way. With his clear approach to what appeared to be an impossible task, I was able to accomplish what I thought to be unaccomplishable. Also, I am indebted to Col Phillip S. Meilinger, Dennis M. Drew, Maj Bruce M. DeBlois and the rest of the educators at SAAS for their penetrating questions and perspectives. Their keen insights opened my mind to most aspects of airpower theory, evidence, and application.

Also, I want to thank three of my fellow classmates in Class IV of the School of Advanced Airpower Studies. First, Maj William F. ("Bill") Andrews, who was always able to clear up any question I might have. His ability to critically analyze any concept and express that analysis coherently so all could understand is to be admired. Second, Maj Thomas Ehrhard for his friendship and undaunted energy. Tom's critical intellect was always there for discussion, debate, and argumentation. He will undoubtedly be a major contributor to the limited body of knowledge on airpower. Finally, Maj Barbara Faulkenberry, who was always able to keep me motivated and put me in my place when I needed it. We discussed many an airpower theory while biking to and from work. Her straightforward approach to life, both professionally and personally, has been an inspiration to me.

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Chapter 1

Preserving the Defense Technological and Industrial Base

The defense technological and industrial base has been called "the fifth service," ranking in importance only after the Army, Air Force, Navy, and Marine Corps. Just as the services are shrinking in the backwash of the abrupt Soviet crackup, America's sprawling defense-industrial complex, after operating virtually on a wartime footing for more than four decades, is also poised on the cusp of a dramatic downsizing.

—David C. Morrison
Government Executive

The future security of the United States will depend on the ability of the defense technological and industrial base (DTIB) to maintain its technological lead and production capacity. At present, the US government is doing little to help preserve that base. The rapid decline in defense budgets is threatening the ability of industry to support the country's future defense requirements. Over the past five years, procurement funds have declined from \$118 billion in 1990 to \$58 billion in 1995. The president's fiscal year 1993 budget called for a \$50 billion reduction in US defense budget authority over five years and deeper cuts can be expected.¹ This makes for a growing challenge in regard to the military industrial complex.

The challenge will be in finding a way to preserve the DTIB. "The Defense Department is simply going to buy a lot less than we have in the past," said Donald Atwood, deputy secretary of defense, in an interview with *Government Executive* in 1992. He points out that not only are the services shrinking, but arsenals are swollen with excess equipment purchased during the 1980s' buildup. "The net result is that there is just not enough money now for everyone to thrive as they did in the past. And that's hard for people to accept."²

The purpose of this paper is to recommend that the US government maintain the DTIB by liberalizing and streamlining controls and encouraging US industry in regard to arms transfers. First, it will define and describe the DTIB and the importance of its preservation. Next, it will summarize US arms transfer policy since 1945 demonstrating that presidents and their administrations make rational political choices in foreign policy decisionmaking. Third, it will demonstrate the maze of controls on the transfer of military technologies to foreign nations. Finally, it will recommend

that the US government preserve the DTIB by actively supporting industry in the arms transfer process.

Chapter Summaries

Before demonstrating how US arms transfer policy can be changed to help preserve the DTIB, a cursory review of terms common to the foreign sales community, along with a historical review of US foreign arms sales, is warranted. This is presented in the next chapter.

Moving from the historical precedents to the present, there is a great fear the US has little or no control over arms transfers and is giving away its technological edge. Chapter 3 addresses those concerns and answers the question on the control of the diffusion of advanced military technologies. It demonstrates the "labyrinth of control" in this area. The Department of State (DOS) and the Department of Defense (DOD), along with many other governmental agencies, work together in a maze of controls comprising the arms transfer decision-making process.³ Chapter 3 also demonstrates, through an analysis of current security assistance policy and interviews with many security assistance experts, that the US government would find it difficult to release anything considered close to an advanced technology. Also, one aspect of interagency control will be described—the National Disclosure Policy Committee—which will demonstrate the level of attention that each major arms transfer receives. It will confirm how proficient the US is at close-holding advanced military technologies.

Given a good understanding of US foreign arms sales controls, chapter 4 recommends a policy shift toward an economic security mind-set and takes the position that it is time for the US government to support the DTIB by encouraging US industry toward worldwide arms sales. Although President Bill Clinton's Conventional Arms Transfer Policy recognizes the importance of economic security by making it a policy goal to "Enhance the ability of the US defense industrial base to meet US defense requirements and maintain long-term military technological superiority at lower costs,"⁴ it offers few suggestions on how to accomplish this and continues to stress a cold war security mentality. A discussion of offsets and coproduction agreements will demonstrate the importance of the current global economy and its effect on the US DTIB. The emphasis of this chapter will be to illustrate that in order to keep the DTIB prosperous and competitive, the US government must aggressively support and allow US arms transfers. The final chapter reviews the major conclusions of this research and presents recommendations for the future of US arms transfers.

A Starting Point

US security assistance is founded on a tradition of cooperation between the US and other sovereign nations with similar values and interests in order to meet common defense goals. It consists of a group of programs authorized by the US Foreign Assistance Act of 1961, as amended, and the Arms Export

Control Act of 1976, as amended, and related statutes by which DOD or commercial contractors provide defense articles and services in furtherance of national policies and objectives.⁵ Foreign Military Sales (FMS) and International Military Education and Training (IMET) are two key programs included in security assistance. This paper will not discuss IMET in detail.⁶ FMS is operated and managed by the DOD. Countries participating in the program pay for defense articles and services at prices which recoup costs incurred by the US. This includes a fee (currently three percent) to cover the cost of administering the program. This includes government-to-government sales only. Commercial sales are a part of security assistance but are limited to commercial export controls alone.

A common term often used with confusion is *technology transfer*, which can be used in two distinct ways. First, within the US national laboratory structure, such as the Wright Laboratories at Wright-Patterson AFB, Ohio, the term *technology transfer* means the movement of advance technologies from the labs or US military to the commercial sector.⁷ Their concern is whether or not a project should be declassified or allowed to "spin-off."⁸ Second, people working in the arms transfer business use the term to describe the diffusion of advanced products or processes (military technologies) to foreign nations. The latter definition is the concern of this paper.

Arms transfer is the term used to describe the decision to move or the movement of defense articles or services from the US to a foreign nation. Whether or not that transfer actually takes place is described by the terms *arms agreement* and *arms delivery*. An arms agreement is the decision to sell or grant the transfer of defense articles and/or services to a foreign nation. Although an *agreement* may have been reached, *delivery* may not have taken place. An arms delivery is the actual movement of a defense article and/or associated services to the foreign nation.⁹ The main confusion usually is in the argument over statistics. It is common for those opposed to selling American military hardware to quote arms agreement amounts in their statistics. Those who recognize that actual *arms deliveries* are much lower than *arms agreements* are quick to emphasize the loss in the DTIB because of the ineptness of American foreign policymakers who did not work to complete the agreement.

Preserve the Defense Technological and Industrial Base

The importance of preserving the DTIB cannot be overstated. Without the capability to surge and rebuild American fighting forces, the US could be placing itself in a perilous position if a future crisis were to evolve concerning US national security. By the year 2001, the congressional Office of Technology Assessment estimates that up to 2.5 million experienced defense workers will have been laid off since the beginning of the defense drawdown.¹⁰ This unprecedented drawdown of the US military has had a debilitating effect on the US DTIB.

Definition and Problem

The Office of Technology Assessment defines the US DTIB as

... the combination of people, institutions, technological know-how, and facilities used to design, develop, manufacture, and maintain the weapons and supporting defense equipment needed to meet US national security objectives. This base has three broad components: research and development, production, and maintenance and repair, each of which includes public and private sector employees and facilities.¹¹

The Office of Technology Assessment goes on to say that the DTIB is segmented into three tiers of firms; the prime contractors, the subcontractors, and the parts suppliers. The first tier, the large prime contractors or weapons suppliers (normally known as the defense contractors) are at the top. Examples of prime contractors include McDonnell Douglas, manufacturer of the F-18 and F-15; and Lockheed/Martin Marietta, currently designing and developing the next advanced tactical fighter, the F-22. The second tier is made up of the major subcontractors (many of whom manufacture electronic devices, such as computers and radars). Examples of subcontractors include Texas Instruments, IBM, and Hughes Corporation. The lowest tier is made up of parts and raw material suppliers. These companies provide subcomponents of final products such as semiconductors or metal fabricators.

The US DTIB has been shrinking since 1985 and the greatest impact has been in DOD procurement dollars. In 1985, procurement funding was at an all-time high of \$130 billion. By 1997, procurement spending is expected to bottom out at \$50 billion in 1993 money; a 60 percent decrease.¹² For example, instead of buying hundreds of aircraft, the Pentagon plans to buy just 20 fighters a year for the immediate future.¹³

Also, while basic military-related research jumped nine percent in 1993, overall money spent on research and development will decrease from \$43 billion to a projected \$28.2 billion in 1997.¹⁴ This is a real 40 percent decrease and reflects a change in US procurement policy. Atwood states the new acquisition strategy will provide for research and development funding but not production funding.¹⁵

This new strategy has a strong downside since US defense firms have not been in the defense business to produce only one aircraft or weapon system. In the past, these firms have made very little money while competing for contracts. The money was made in the production phase. Unless a new economic strategy is developed to convince US defense firms it is economically viable to compete for developmental dollars, we can expect defense firms to leave the defense business or look for more lucrative markets.

How vulnerable is the DTIB? A number of defense industry executives and analysts have warned that after the drawdown the DTIB may not be able to respond to a future crisis as it has in the past. They question this new acquisition strategy and its ability to hold on to all levels of the DTIB. The fear is that one or all of the three tiers will be lost forever. Without a

continuous demand for spare parts and supplies how will subcontractors and suppliers remain in business?

In a 1991 report to Congress, DOD stated that free-market forces, in general, will guide the restructuring of the industrial base. It also stated the ability to meet future national security needs will depend largely on the capacity of individual firms to shift from defense to commercial production, and then back again, as required.¹⁶ This strategy is grossly inadequate and shortsighted. DOD has the responsibility and key resources for the defense of the United States. In the absence of DOD plans, there is no realistic way for free markets to fill the gap. It is unrealistic to suppose that private business firms will, on their own initiative, make expensive investments that amount to long-odds gambling on future DOD requirements and policies.¹⁷

In addition, many defense companies lack the experience and specialized knowledge to shift to commercial production and compete successfully in commercial markets. While prime contractors, such as McDonnell Douglas, have their hands in civilian or commercial production, specialized military equipment and supplies from some subcontractors and suppliers may have no comparable civilian market. In a 1992 survey, the former General Dynamics tank-building Land Systems Division projected that following a break in production, all of its suppliers would suffer, and that 15 percent would actually go out of business.¹⁸ The Joint Chiefs of Staff (JCS) also voiced concerns about the effect of prime contractor retrenchment in a recent assessment of the nation's subcontractor capability stating, "the loss of sub-tier suppliers and manufacturers of subsystem components of larger systems is a threat to our ability to field state of the art weapons on a timely basis."¹⁹

Recognizing these overly ambitious expectations placed on the private sector, in May 1992, the DOD reaffirmed it would still rely on the free market to restructure the DTIB during this period of reduced defense spending. However, it did establish a process to identify critical manufacturing technologies and processes, products, and capabilities. The DOD will also monitor changes in the DTIB for potential loss of these critical items and take actions to preserve them when they may be lost and cannot be recovered to meet an emerging threat.²⁰ This policy guidance indicates DOD's recognition that free-market forces alone may not ensure the viability of critical aspects of the DTIB. It is at least comforting to see the DOD recognizes that:

***The defense technological and industrial
base (DTIB) must be preserved
and the private sector, on its own
initiative, cannot ensure it.***

With these major themes in mind, chapter 2 will now give you the historical framework for arms transfers in the United States.

Notes

1. Jeff Bingaman, *Defense Industrial Base: An Overview of an Emerging Issue* (Washington, D.C.: General Accounting Office [GAO], March 1993), 1.
2. Donald Atwood, "Managing Decline," *Government Executive*, August 1992, 58.
3. In chap. 3 this "Labyrinth" will be addressed in detail.
4. President Bill Clinton, US Conventional Arms Transfer Policy, Department of State, Washington, D.C., 17 February 1995.
5. *Defense Security Assistance Agency (DSAA)* informational pamphlet, November 1993.
6. IMET is where the US provides education and training to foreign nations on a grant basis. A common use of IMET in the US Air Force is when allied and foreign officers attend Squadron Officer School, Air Command and Staff College (ACSC), and Air War College at Maxwell AFB, Alabama. An example of IMET's success is that 26 officers who attended ACSC in the past are currently chief of staff of their air forces.
7. Jerry Heffner, telephone interview with author, National Air Intelligence Center, Wright-Patterson AFB, Ohio, 10 February 1995.
8. John Alic et al., *Beyond Spinoff: Military and Commercial Technologies in a Changing World* (Boston: Harvard Business School Press, 1992).
9. Over the years there have been many more arms agreements than actual deliveries. See DSAA: *Fiscal Year Series* data. This is a DOD document published annually.
10. Stephen Budiansky et al., "Flying Blind into a Turbulent Future," *U.S. News & World Report*, 7 December 1992, 59-60.
11. This definition can be found in the GAO report, *Redesigning Defense: Planning the Transition to the Future US Defense Industrial Base*, July 1991.
12. Bruce A. Smith, "US Firms Face Long Adjustment," *Aviation Week & Space Technology*, 15 March 1993, 48.
13. Stephen Budiansky, "Back to the Arms Bazaar," *U.S. News & World Report*, 1 April 1991, 20.
14. Smith, 48.
15. Atwood, 58.
16. Bingaman, 4.
17. Ibid.
18. David C. Morrison, "Base Concerns," *Government Executive*, August 1992, 24.
19. Peter Grier, "What's Left of the Air Force Program?" *Air Force Magazine*, December 1994, 68.
20. Bingaman, 4.

Chapter 2

Arms Transfers as an Instrument of US Foreign Policy

Contrary to much popular opinion, the US government has managed this aspect (arms transfers) of its foreign policy and national security policy adequately. While the appropriateness of those conceptions of the national interest promoted by successive Republican or Democratic administrations since Franklin Roosevelt's administration is a continuing feature of the public debate in this country, each administration has managed its arms transfer programs consistent with its own definition of that national interest.

—Dr Michael D. Salomone
The Reluctant Supplier

The modern era of American arms transfers began with the Lend-Lease act in 1941 for supplying arms to Great Britain and the former Soviet Union. For the next 20 years, arms transfers usually took the form of grant aid (conditional gifts) rather than with cash or credit sales. The US was the economic giant during and after World War II and employed its economic power by promoting national economic development, and national and regional security.

The first significant arms transfer from the US government to another government in this era was the delivery of 50 destroyers to the United Kingdom in 1941. In exchange for these over-aged ships, America received British bases in the Atlantic.¹ This would be the start of a 50-year history in arms transfers. It would also institute a perennial debate over whether or not the US should be contributing to the spread of arms around the world or promoting arms control. These questions persist today.

In the years that have passed since the Roosevelt destroyer deal—security assistance, the government's transfer of military equipment and services to other countries—has been a persistent feature of US foreign relations. This chapter will demonstrate how the US accomplishes arms transfers with a purposeful focus due to reasonable foreign policy considerations.

Overview and Argument

Arms transfer policy since 1945 can be broken into four periods. These four periods make it apparent that US arms transfer policy has had a regional focus. That focus shifts based on the interests of US policymakers and the foreign policy challenges of the day. The regional emphasis of transfer policy changed from Europe, to East Asia and the Pacific region, to the Middle East

concurrent with the rearmament of NATO, the Vietnam War, and the 1973 Middle East War and aftermath respectively.²

The fourth period, with an emphasis on a two Major Regional Conflict (MRC) strategy is exacerbated by the post-cold-war world. This era has a dual foreign policy perspective. One perspective continues arms transfers to the Middle East striving for regional stability. A second perspective focuses on East Asia and the Pacific due to security interests involving North and South Korea. Again, when the security interests of the US change or shift around the world, so does the US arms transfer policy. In February of 1995, President Clinton released *A National Security Strategy of Engagement and Enlargement*.³ It asserts, "The focus of our (US) planning for major theater conflict is on deterring and, if necessary, fighting and defeating aggression by potentially hostile regional powers, such as **North Korea, Iran or Iraq**."⁴

This policy will continue the tradition of the past 50 years. Arms transfers are and will continue to be an instrument of foreign policy based on US national security interests and the foreign policy challenges of the period.

NATO Rearmament, 1945-1960

The end of World War II, although a great moment in US history, marked the beginning of a world security environment that would affect US arms transfers for nearly 50 years. That security environment was the "cold war." The US was the only major power to emerge from World War II militarily and economically intact. In the next 15 years,⁵ Presidents Truman and Eisenhower realized that from the ashes and debris in Europe arose a new threat to world peace and stability. That security threat would be communism, and the foreign policy would be containment.

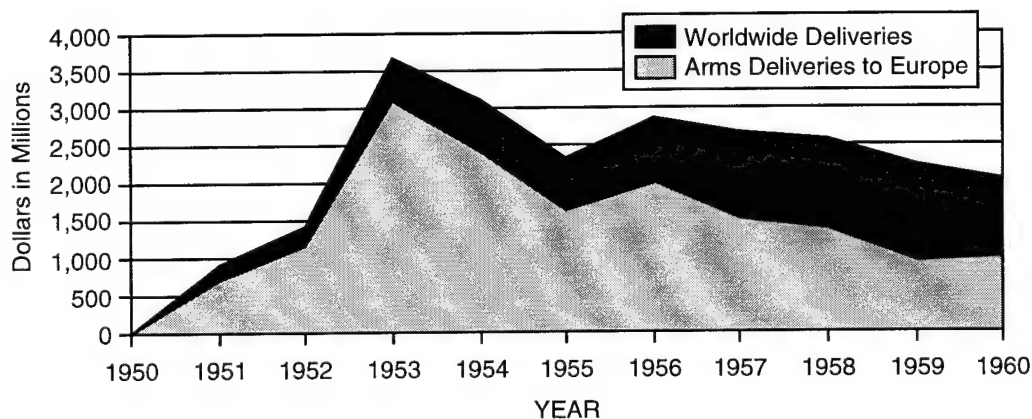
Grant aid in the cold war began with Greece and Turkey in 1946 and in Western Europe in 1948. By then, the Mutual Defense Assistance Program, authorized by Congress, had been designed to accomplish arms transfers on a grant basis for the NATO allies of the US. The goal of this program was to strengthen NATO military forces without requiring NATO countries to postpone or abandon economic recovery efforts that had been established under the Marshall Plan.⁶

This program went hand in hand with the Joint Strategic Operations Plan (JSOP), a policy planning instrument used extensively during the 1950s and 1960s. The JSOP consisted of planning documents that related military requirements to capabilities. It described the military threat as the Soviet bloc. It then listed the required capabilities of the US and each of the NATO countries in order to meet that threat. The document described what each country could do once they had received US arms in order to supplement US forces in-theater. In other words, this document justified the transfer of arms to NATO allies in order that, as a whole, both NATO and the US would be able to meet a Soviet conventional threat.

This method of deciding who should receive arms transfers, and what equipment and services they should get, continually focused the Truman,

Eisenhower, and Kennedy administrations. The JSOP was an institutional process which pushed for the continuing transfer of arms based on threat and capability. The foreign policy implications of these almost standard operating procedures is evident in DOD data. Beginning in 1950, the DOD began tracking arms agreements and deliveries on a fiscal basis. That data is now available in a one-source document currently updated by the Defense Security Assistance Agency (DSAA).⁷

Figure 1 shows actual deliveries of military equipment and services in millions of dollars worldwide and to Europe. This chart numerically and graphically demonstrates how the majority of arms transfers were in support of Western Europe. In 1953, at the end of the Korean conflict, nearly 70 percent of all US arms transfers (\$2.6 of \$3.7 billion) were still to Europe. Although by 1960 this amount would decrease to just over \$1 billion, it would still be over one-half of all arms transfers made by the US worldwide. This demonstrates that even though the US military was involved in a crisis in East Asia and Pacific region (the Korean conflict), the majority of arms transfers went where US policymakers believed the clearest threat to US national security interests were. In 1953, US foreign policy was primarily focused on containing the Soviet conventional threat in Europe, not in Korea.



Note: Arms *deliveries* versus *agreements* are used because they are the best indicator of the extent of US arms transfer activities. Deliveries are the only indicator that represent the actual delivery of weapon systems, equipment, and services to other nations. As discussed in my introductory chapter, the distinction between arms agreements and actual deliveries is crucial when attempting to study what has happened in the arms transfer arena. Dr Michael D. Salomone, a political scientist at Georgia Tech University and author of three books on arms transfers, was the first to identify this indicator.

Source: Department of Defense, *Defense Security Assistance Agency (DSAA): Fiscal Year Series*, 30 September 1993.

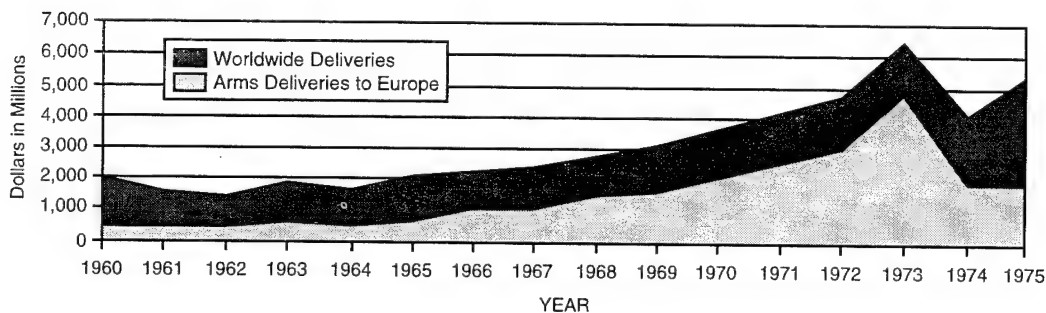
Figure 1. US Arms Transfers—Focus on Europe, 1950–1960

The Vietnam Era, 1960–1973

This second period of interest took up much of the foreign policy decision-making time of the Kennedy, Johnson, and Nixon administrations. During this phase in US arms transfer history, the security assistance community

developed two distinct programs, the Military Assistance Service Fund (MASF) and the Excess Military Assistance Service Fund (EXMASF), to specifically handle the Vietnam War. Although other security assistance programs were used, these two programs were developed and expanded in order to grant arms transfers quickly to those nations involved in Vietnam. Between FY 1965 and FY 1975, the countries of Korea, Laos, Philippines, Thailand, and Vietnam received equipment and services valued at more than \$18 billion.⁸ This figure only includes those items delivered through the MASF and EXMASF programs. These deliveries constituted more than 35 percent of all US military deliveries worldwide.

The impact of MASF and other grant programs is very similar to the rearmament of Europe in the 1950s. US interests were highly focused on this region of the world. The containment of communism was still at the forefront of strategic thought although containment was expanded to more peripheral areas such as Vietnam. Europe, although still receiving arms transfers to keep NATO strong, was reduced in importance while East Asia and the Pacific region became significant to both political and military leaders. Figure 2 represents all US arms deliveries to East Asia and the Pacific region from 1960 to 1975.⁹



Source: DOD, DSAA: Fiscal Year Series, 30 September 1993.

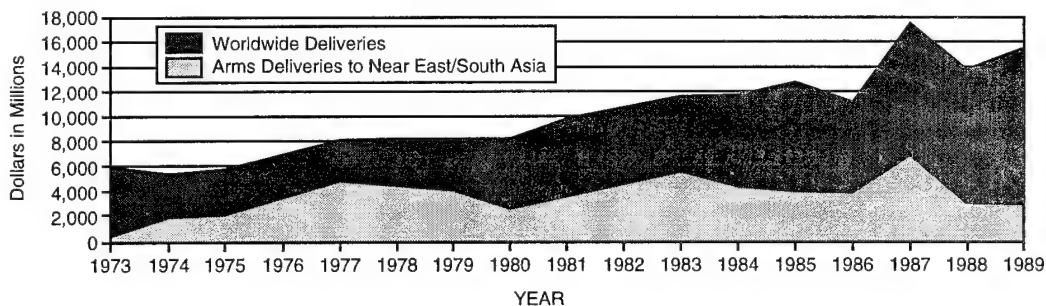
Figure 2. US Arms Transfers—Focus on East Asia and the Pacific Region, 1960–1975

Arms transfers increased as America's involvement in the war increased. In 1965, the US was beginning its first major air campaign—Rolling Thunder. With the start of that campaign came a noticeable increase in arms deliveries to the region. By 1973, Presidents Johnson and Nixon had increased US involvement by increasing US personnel and equipment and, as DSAA data shows, also the amount of arms deliveries to East Asia and the Pacific region. In 1966, the first deliveries through the MASF program totaled \$469 million worth of equipment and training. By 1973, the US was spending \$4.3 billion per year on this one program. By the time the US would pull out of Vietnam and dismantle the MASF program in 1975, the US had spent over \$18 billion on arms transfers (military equipment and services) in the form of grants to foreign countries in the region.

Again, DOD figures numerically and graphically show that arms transfers were used as an instrument of foreign policy and that foreign policy was based on US national security issues of the day.

The Middle East Era, 1973–1989

The Near East and South Asia did not receive much in the way of security assistance until the 1973 Arab/Israeli War when FMS deliveries rose dramatically. From FY 1966 to FY 1970 deliveries remained well below \$500 million, but began to expand rapidly by 1974. Deliveries to this part of the world did not exceed \$1 billion until then, when \$1.8 billion in FMS were delivered. From FY 1974 through FY 1980 FMS deliveries ranged between \$2 billion and \$5 billion. For the ten-year period 1971 through 1980, FMS deliveries with the Near East and South Asia constituted the bulk of FMS deliveries. In that period, over \$136 billion in *agreements* were negotiated, of which over \$88.5 billion in agreements were with Near East countries. This represented 65 percent of all FMS agreements. In *deliveries*, over \$25 billion in FMS equipment and services were delivered to the Near East and South Asia. Again, this represents over 50 percent of all FMS deliveries throughout the world. Figure 3 numerically and graphically demonstrates this point.



Source: DOD, DSAA: Fiscal Year Series, 30 September 1993.

Figure 3. US Arms Transfers—Focus on the Near East and South Asia, 1973–1989

A unique feature about this era is the start of the commercial sales side of security assistance. Until 1970, arms transferred from the US were only in the form of government-to-government sales or grants. However, in fiscal year 1971, US commercial firms who had applied for and acquired the necessary licenses were permitted to negotiate directly with defense industries or ministries of other countries. In the first five years, worldwide commercial sales ranged between \$500 and \$900 million. The Near East and South Asia region received about 25 percent of those sales. From 1976 until 1983 these sales remained consistent: worldwide sales averaged \$2 billion, while the Near East and South Asia region received just under \$1 billion (around 50 percent of all commercial sales). After 1983, commercial sales doubled,

sometimes tripling, with worldwide sales averaging \$5 billion a year. The Near East remained consistent in commercial sales averaging around \$1 billion a year from 1976 until 1989.

Another unique feature about this era and region is the US relationship with Israel. Although FMS was the primary vehicle for most transfers to the Near East, one of the largest recipients of US military equipment and services, Israel, also received over \$16 billion in foreign military financing (FMF) waivers, finance guarantees or direct financing.

The DOD has a program that ensures individuals, corporations, and financial institutions against credit risks and nonpayment by a recipient nation for equipment or services purchased through FMS channels. In the Direct Credit Program, credit is provided through funds appropriated by Congress. This program was developed to be used by developing countries, but it has been almost exclusively used to provide credit to Israel. The funds are not specifically designated by the Congress for individual recipients; rather, the Congress places a ceiling for the sales credit programs. The exception again is Israel. Through waived credit, the US government has absolved Israel of over \$1 billion a year over the period 1974 to 1989 (since 1984 the actual figure has been over \$1.4 billion). In a very real sense, the US government is using "grant assistance" in its FMS dealing with Israel.

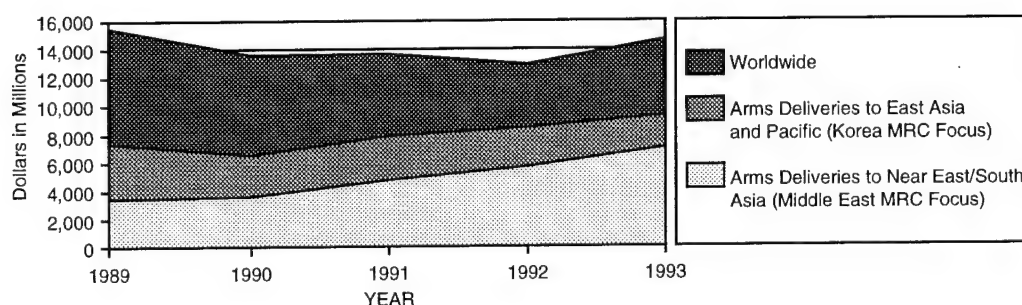
These "special programs" for Israel are tied directly to the foreign policy interests of the US. These commitments, especially to Israel, Saudi Arabia, and Iran (until 1979) were supported by both the Republican and Democratic administrations of Presidents Ford, Carter and Reagan, respectively.

Post-Cold-War Period, 1989–1993

The period between 1989 and 1993 reflects the uncertainty of the post-cold-war world. The US continues to transition from a bipolar-focused foreign policy to a more flexible policy based on regional stability and US enduring values. The underlying theme of the cold war provided the necessary policy tools to send arms around the world. In the name of controlling Soviet expansionism, the US could negotiate arms *agreements* to any country it felt worthy of controlling the weapons. With the cold war over, the US has developed a two MRC strategy in an attempt to focus both foreign policy and military strategy.¹⁰ For the first time in arms transfer history, we see a split on where the majority of arms should be delivered. President Clinton's most recent National Security Strategy document explains why there is a split by mentioning the perceived threats. They are North Korea, Iran, and Iraq.¹¹

DOD data (fig. 4) shows the split in foreign policy direction in relation to arms deliveries and supports the national security interest focus of the Bush and Clinton administrations since 1989. Arms transfers are split between the two MRCs. The Near East and South Asia are still receiving a great deal of all arms deliveries as the US strives for regional stability in the Middle East. For example, more than one-half of all security assistance in 1993 was in the form of arms agreements with Israel, Saudi Arabia, Kuwait, and Egypt (nearly

\$7 billion of \$14.3 billion in arms deliveries).¹² This is consistent with the decisions made by the Bush administration in 1990. The Gulf War and continuing UN sanctions on Iraq are two reasons the US foreign policy focus remains on the region. Others include the Arab/Israeli question, containing Iran, the Israel/PLO question and, of course, the ever important flow of oil from the Persian Gulf.



Source: DOD, DSAA: Fiscal Year Series, 30 September 1993.

Figure 4. US Arms Transfers—Focus on a Two MRC Strategy, 1989–1993

The second major region of concern for the Clinton administration is where North Korea resides, East Asia and the Pacific region. The US has a major commitment to the South Korean government and will continue to center a great deal of attention on this region. One of President Clinton's major policy statements has been on "Combating the spread and use of weapons of mass destruction and missiles."¹³ The recent negotiations concerning North Korea's attempt at building nuclear reactors, that could help in the development of fuel for nuclear weapons, has placed an increased emphasis on the region.

Other reasons for US interest are identified in the president's National Security Strategy. "East Asia is a region of growing importance for US security and prosperity. Now more than ever, security, open markets, and democracy go hand in hand in the US's approach to this dynamic region."¹⁴ Security of the region is President Clinton's number one goal. Dealing economically with countries such as Japan, China, and the fast growing Association of Southeast Asian Nations is second. The promotion of democracy and human rights is a close third. As figure 4 shows, nearly 25 percent of all US arms *deliveries* went to East Asia and the Pacific region. These transfers have remained consistent with between \$3 billion and \$4 billion in arms deliveries per year arriving in the region. President Clinton's three major foreign policy considerations (security, economics, and democracy) allow for the use of US arms transfers as an important instrument of foreign policy.

Conclusion

This chapter has demonstrated that US arms transfers are used as an instrument of foreign policy based on US security interests. These interests

are decided upon by the focused decisions of presidents and their administrations as they react to the foreign policy challenges of the day.

***Arms transfers are used as an instrument
of foreign policy based on US national
security interests and the foreign policy
challenges of the day.***

There is a great deal of criticism anytime anyone recommends increasing arms sales to foreign nations. So before this recommendation is made in chapter 4, it is important to discuss the control of advance military technologies and the decision-making process used to decide which arms will be actually transferred. That will be the discussion of my next chapter—The Labyrinth of Control.

Notes

1. In the Roosevelt Library at Hyde Park the original letter that made the transfer possible, signed by Adm Harold R. Stark, the Navy's chief at the time, can be viewed addressed to President Roosevelt. It certified that the destroyers were not essential to the US in view of the national security value of the bases obtained through the exchange.

2. East Asia and the Pacific region include the following recipients: Australia, Brunei, Cambodia, China, Fiji, French Polynesia, Hong Kong, Indochina, Indonesia, Japan, Gilbert Islands, Korea, Laos, Macau, Malaysia, Mongolia, Myanmar, Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Papua New Guinea, Pitcairn, Philippines, Singapore, Solomon Islands, Taiwan, Thailand, Tokelau, Tonga, Tuvalu, Vanuatu, Vietnam, and the Western Samoa. The Near East and South Asia region includes these recipients: Afghanistan, Algeria, Bahrain, Bangladesh, Bhutan, Egypt, India, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Maldives, Morocco, Nepal, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Syria, Tunisia, United Arab Emirates, and Yemen.

3. President Bill Clinton, *A National Security Strategy of Engagement and Enlargement* (Washington, D.C.: Government Printing Office, February 1995).

4. Ibid., 9. Emphasis added by author.

5. It is essential to understand that NATO arms transfers did in no way end in 1960 because of the start of the Vietnam War. Containing the spread of the Soviet threat was a consistent theme until the demise of the former Soviet Union in 1989. Arms transfers remained fairly constant to Europe until that demise. My point here is the regional emphasis that took place post-World War II due to that perceived threat.

6. Dr Michael D. Salomone et al., *The Reluctant Supplier: U.S. Decisionmaking for Arms Sales* (Cambridge, Mass.: Oelgeschlager, Gunn & Hain Publishers, 1983), 4.

7. Department of Defense, *Defense Security Assistance Agency: Fiscal Year Series*, hereafter cited as *DSSA*, 30 September 1993.

8. Ibid.

9. Again, arms *deliveries* are used to show the actual amount of weapon systems and equipment that got to that region. By comparing total worldwide deliveries to those just in the East Asia and Pacific region it is easy to show the level of effort that was placed in this region.

10. MRC stands for Major Regional Conflicts or Contingencies—President Clinton's administration has fielded a military force structure to help defeat aggression in two MRCs nearly simultaneously. See President Clinton, 9, for a discussion on the two MRC strategy.

11. Ibid.

12. DSAA.

13. Clinton, 13.

14. Ibid., 28.

Chapter 3

The Labyrinth of Control

It is the "sense of the Congress" that the President should "maintain adherence to a policy of restraint in conventional arms transfers."

American policy is "to encourage regional arms control and disarmament agreements and to discourage arms races."

—Arms Export Control Act of 1976, Section 1

There is a great fear United States arms transfer policy lacks control and allows valuable military technologies to quickly end up in foreign hands. Recent sales of F-15Es to both Israel and Saudi Arabia are held up as examples of this diffusion of military technology.¹ In reality, the control measures established by public law, presidential policy, congressional actions, and the US military establishment are more than adequate to preserve America's technological lead. This process is complex and can be excessive at times. There is a "labyrinth of controls" on conventional arms transfers.

The purpose of this chapter is to demonstrate there is more than adequate control on the transfer of advanced military technologies to foreign nations. It will describe the decision-making process the president, the DOS, the DOD, and other government agencies use in controlling arms transfers.

The arms transfer control process is important for three reasons. First, as already described in chapter 2, the US government has continuously relied upon arms transfers as an instrument of foreign policy. Second, considerable popular and political discussion assumes there are few, if any, controls on US arms transfers, when in fact, there is a complex control process to ensure the US maintains its technological lead. Finally, if the DTIB is to keep its technological lead, these controls must be eased or streamlined so that production lines and processes may be maintained. This final reason will be the discussion of chapter 4.

The Arms Transfer Process

In 1983, Dr Michael D. Salomone published a book titled *The Reluctant Supplier*.² In that book, Dr Salomone describes the six functions of arms sales decisionmaking. These six functions have not changed. They are (1) recognition of a recipient's needs and wants; (2) initial review of a government's request for information; (3) policy review of a purchase request; (4) negotiation and development of an agreement; (5) execution of an agreement; and (6) "feedback" and evaluation concerning the recipient's use of the assistance

received.³ From the identification of the need or want to the actual delivery of a weapon system, an elaborate and complex approval process lives and breathes within the multitude of US government actors handling arms transfers.

It is relevant to note that all public law and policy guiding the arms transfer process was written during the cold war. The Arms Export Control Act (AECA) of 1976 and the Foreign Assistance Act of 1961, as amended, allow the president to delegate the authority for arms transfer policy to the DOS. In order to sell arms abroad, US defense firms require a munitions license. This license can only be granted by the State Department. Under the AECA, US firms and military services are prohibited from marketing US arms to foreign governments or industries unless that government specifically requests information or a purchase. These laws all push for a "policy of restraint in arms transfers" and "encourage regional arms control while discouraging arms races."

Also, appropriation and authorization acts guide DOD and DOS agencies in dealing with the security assistance question. For example, the House and Senate Armed Services committees will receive "program content notification" 15 days in advance of a commitment to loan or grant funds for major defense equipment (MDE). This report must be submitted by the DOD due to the Foreign Assistance and Related Programs Appropriations Act.

Many actors are involved in the six basic decision-making functions of security assistance. Collectively these actors constitute a system the US government uses to handle this complex problem. It should be recognized that the system is dynamic and changes with each request depending on the equipment or service requested, which country is doing the requesting, and what level of political attention that request may or may not be getting. It is, however, a process that can be understood.

The principal field personnel in countries that receive requests for information on the purchase of military equipment are ambassadors and their political counselors; defense attachés and security assistance officers. In addition, industries may send specialists to provide advice or temporary services. At the regional level, security assistance staffs at the unified commands (e.g., European Command and Pacific Command) monitor and support country security assistance teams.

Within the DOS, a number of officials are involved in arms transfers. The secretary of state supervises and provides general direction over foreign assistance issues and determines if there will be a program and, if so, its size, scope, and when it can take place. The primary contacts within the State Department for arms transfer issues rests with the offices of the Assistant Secretary of State for Political-Military Affairs and the Under Secretary of State for International Security Affairs (ISA).⁴

The primary day-to-day workers on security assistance and arms transfers within the Political-Military Affairs branch are the Office of Defense Relations and Security Assistance, which approves and monitors all government-to-government sales, and the Office of Defense Trade Controls, which is responsible for granting US industries munitions licenses before any

transfer can be approved. None of these agencies make decisions alone or in the dark; they frequently request specific studies and analysis from the many regional desks within the State Department. These regional bureaus may, in turn, request an opinion from the security assistance officer or ambassador within the requesting country.

By far the majority of actors in the arms transfer arena are in DOD. Although the DOD's role is as executor and implementor of State Department policy, that role is not insignificant. The secretary of defense sometimes meets with the president or the secretary of state over security assistance matters. More immediate policy decisions are generally made by the assistant secretary of defense for ISA. The ISA office is broken down into regional offices and desks considering, primarily, the political and military implications of each transfer.

The primary agency within DOD for directing and supervising the execution of security assistance programs is the Defense Security Assistance Agency. The DSAA is the focal point for all communication within the DOD regarding government-to-government arms transfers. Commercial sales are handled by the Office of Defense Trade Controls in the State Department. However, if a major weapon system is requested through commercial channels, the DOS will ask for DOD advice in regards to the ramification of that sale. If a technology assessment is required, the Defense Technology Security Administration (DTSA) will make a determination on whether or not advanced technologies are being risked by the sale or transfer of that product. DTSA has this role whether it is a commercial or government-to-government transfer.

The joint chiefs also have an input that shapes arms export policy. Joint force commanders and planners have an obvious interest in the balance of forces in regions where they may be called to conduct operations.⁵ The joint chiefs, specifically the J-5 Planning Group, works hand in hand with the unified commanders and their staffs to assess the implication of a proposed sale or transfer. When speaking with members of the joint chiefs, however, they revealed they only concern themselves with one to two percent of all security assistance cases.⁶ Otherwise, the joint chiefs rely on DSAA and the military departments for most arms transfers. Their main role is to ensure the chairman is informed of major arms transfer proposals and is not surprised by a controversial sale.⁷

The individual services—Army, Navy, and Air Force—have their own security assistance divisions. The Army has the US Army Security Assistance Command (USASAC), the Navy has its International Programs Office (IPO), and the Air Force has its International Affairs directorate under the secretary of the Air Force (SAF/IA). Each works within its own system as the primary point of contact for certain weapon systems. For example, if a tank is requested for purchase, USASAC will be asked to assess the ramifications of that sale. Missiles are under the auspices of the Navy, so the Navy IPO would become the lead agent to support or advise on that transfer. The request for information or purchase of an F-16 or F-15 would obviously fall into the hands of SAF/IA.

Although the DOD and DOS are the primary players in most arms transfers, there are many other agencies that may become involved. The Treasury Department, the Central Intelligence Agency (CIA), and the Office for Management and Budget are less directly involved but can have an important role. The General Accounting Office (GAO) frequently reviews the process, as do the staffs of the House and Senate Armed Services committees. In some politically sensitive cases, the president or the Congress may take a central role in the arms transfer process.

The Question of Disclosure

The act of revealing or uncovering controlled military information is referred to as disclosure. The disclosure of sensitive or advanced military technologies is the prime reason there are controls in arms transfers. A common theme from president to president is maintenance of the US technological lead. Preserving this technological lead is the common excuse for an arms transfer disapproval. The question of disclosure is what keeps every agency involved in each arms transfer decision.

Controlled military information may be classified or unclassified. This information can be disclosed to foreign nations and governments in many ways including:

- commercial or government sales;
- licensed production;
- cooperative research and development programs;
- discussions between US and foreign nationals;
- foreign visits to US installations;
- professional meetings or symposiums which include foreign nationals; and
- flights/rides in US aircraft or military equipment by foreign nationals.

Because of the many ways controlled military information can be disclosed, the US government has come up with numerous written documents that provide guidance and direction on the release of military information. Some are general, others provide specific release guidance. They include the following:

- Foreign Assistance Act of 1961, as amended;
- Arms Export Control Act of 1976, as amended;
- International Traffic in Arms Regulations;
- DOD implementing directives and OSD policies;
- National Disclosure Policy regulations; and
- Political and military baselines.

The last two on this list can demonstrate how the process works and the level of attention that each major arms transfer receives.

The number of requests for US military equipment usually exceeds 10,000 per year.⁸ Within the services, specifically the Air Force and the Navy, baselines are developed to handle this large number of requests and answer

the question on whether or not a transfer of military arms should take place. These documents are a proactive way of dealing with requests for information or purchase before a request comes in. They are developed by the lead agent for a particular weapon system. For example, SAF/IA is responsible for developing the baselines for USAF fighter aircraft. This package is coordinated on throughout the Air Force staff. SAF/IA sends a draft baseline to SAF/AQ, AF/XO, AF/LG, AF/IN, and finally to the chief of staff for approval. Some baselines are developed by more than one service when there are overlapping interests.

For example, a recent draft of the 1995 fighter weapons baseline has been approved by the chief of naval operations (CNO) and the chief of staff of the Air Force (CSAF). Its purpose is stated as: (1) establish export configurations which preserve the US qualitative edge in its tactical munitions; (2) ensure US interoperability with export versions; (3) protect critical US technologies; and (4) present a historical view of conventional weapons transfers. Its main goal is to gain CNO and CSAF approval for transfers of export versions for NATO and special treaty nations and establish USAF and USN positions on the release of munitions to all nations. It is seen as a proactive way to deal with the cumbersome problem of numerous arms requests. Staff officers need only refer to the preapproved baseline to determine if a future request has a chance at approval.

Baselines speed up the workload but are predisposed to be conservative. No midcareer military officer (the primary staffers on these decisions) wants to be responsible for releasing a US technology or weapon system to a foreign country only to find out he/she shouldn't have. An exception to these proactive baselines can be made by the National Disclosure Policy Committee (NDPC).

The NDPC is an interagency working group that is the focal point for disclosure policy exceptions. If a request is made by a country for military equipment that it is not authorized by a military baseline, it is disapproved. If the request is made again or with some political clout, an exception can be authorized. This exception can only be approved by the NDPC.

The committee is broad based with members from DOS, Commerce, the CIA, the JCS, and DOD. DOD members include the Arms Control and Disarmament Agency, the Army, Navy, Air Force, ISA, Defense for Policy, Defense Intelligence Agency (DIA), Ballistic Missile Defense Organization, and a few others. There are even observers from NASA and the National Security Agency.

The committee is given a reasonable amount of time (it could take months) from notification of the exception to study the case and render their decision on the request. If there is a difference of opinion, the committee may meet in an attempt to come to a consensus. If a consensus cannot be reached, a decision is made by the under secretary of Defense for Policy. Each member has 10 days from that decision to attempt to change the policy secretary's mind.⁹ That decision is then submitted to the secretary of defense where he will approve or overturn the decision and pass it on to the State Department.

In general, the concern of this committee is to assure advanced technological products and processes are not diffused to foreign nations.

An Example within the Labyrinth

A limitation of this paper is that it is unable to discuss any one arms transfer in its entirety because it would make the paper classified. Although a description of the process itself is not classified, the reason a certain country did or did not receive approval for a transfer is considered sensitive information. Figure 5 is used to walk the reader through a hypothetical arms sale.

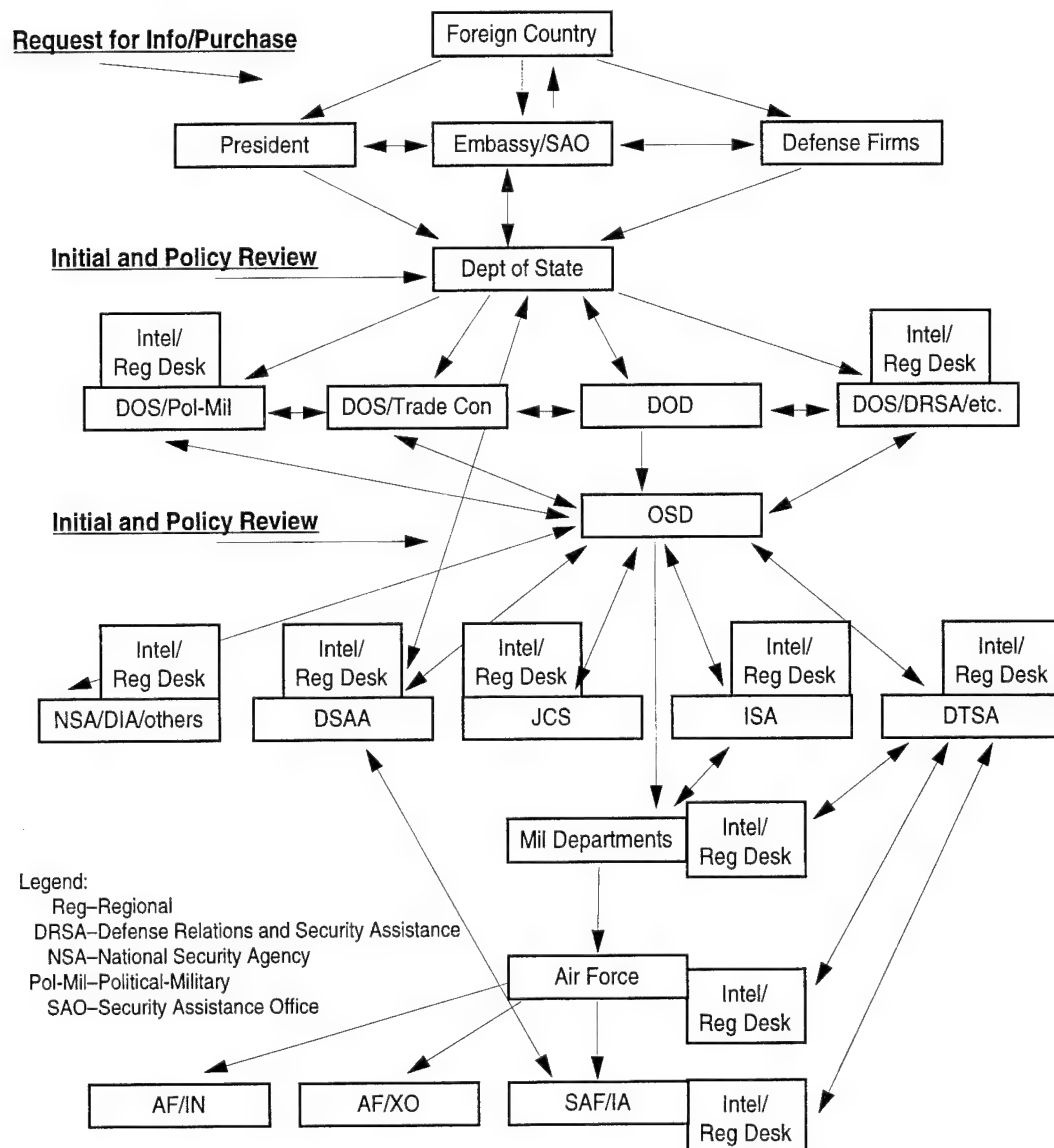


Figure 5. The Labyrinth of Control

For example, a Middle East country would like to purchase a squadron of US McDonnell Douglas F-15Es for its air force. How would that country put its request in? How would the US government decide on whether or not to accomplish the sale?

Recognition of a recipient's needs and wants. Recognition of a government's needs and wants requires two things. First, elements of the US government must receive and forward the request to the appropriate policymakers in Washington, D.C. Second, there must be an assessment made of whether or not the requesting country could handle the equipment and its effect on regional stability.

The foreign country has generally three ways in which to place a request for purchase. First, a direct request could be made to the president or the secretary of state while on or when hosting an official visit. Second, and more frequently, host government officials may ask security assistance officers, defense attachés, or the in-country US ambassador about the weapon system. Finally, the host government or military may request to purchase the airplanes from a US commercial representative (US defense firm) who may be in-country. Regardless of the type of request for information or purchase, an initial review and policy review must be accomplished.

Initial and policy review of the government's request for purchase. Prior approval of arms transfers varies with the type of country doing the requesting and the type of equipment being requested. The official request, either in the form of a written document or received orally by a US government representative (e.g., the ambassador), is handed over to the DOS for initial review. Both FMS and commercial sales are subject to this process. In this case, since it is a request for significant combat equipment (F-15Es), an FMS review would be accomplished.

This review can be completed in two ways depending on whether the country is considered a close ally or not. If the request comes from other than a close ally, it must go through all the major State Department agencies—Office of the Assistant Secretary of State for Political-Military Affairs, Office of Defense Trade Control, Office of Defense Relations and Security Assistance (DRSA), and their regional and country desks.

If the country requesting the purchase is a close ally, then the communication channels would be much quicker. Sales to these countries are considered less controversial; thus, the decision process is rather routine. However, in our example, a Middle East country is requesting major defense equipment that will be of significant value so the process will be as cumbersome as a nonally. MDE is defined as "any item of significant combat equipment on the US Munitions List having a nonrecurring research and development cost of more than \$50 million or a total production cost of more than \$200 million."¹⁰ Subdivisions are made into dollar groups describing arms transfers as less than \$7 million, \$7 million to \$25 million, and more than \$25 million.¹¹

Separate categories of transfers have been designed because of congressional desire to have an optional voice in significant transfers and the US's

desire to differentiate among recipients. Congress and most agencies of the federal government want to have control. For example, any international agreement which commits the US government to the sale of defense articles or services for \$50 million or more, or any MDE of \$14 million or more, will be reported by DSAA to the Congress under the terms of the AECA, section 36(b) prior to conclusion of the agreement.¹²

While the State Department begins its review process, the DOD will be notified of the request, and all the agencies under DOD in figure 5 will begin initial and policy review. As can be seen from the diagram, each agency, whether in DOS or DOD, has its own set of regional and country intelligence desks to refer to for assessment of the requesting country. Remembering that other agencies such as the CIA will be asked for an assessment, you can see that policy reviewers will be inundated with intelligence information on the requesting country. In an example like this one, where a country is requesting F-15Es, the DSAA, ISA, and the Air Force's SAF/IA would be primary players.

The SAF/IA office would be the primary point of contact for developing a package for this decision. This is where the first look at the military baselines takes place. Generally, in an other than a close ally request, the baseline may not initially approve the request. Again, it is important to remember that baselines are set up to be proactive for decisionmaking. They are conservative and it is common for initial requests to be stalled.¹³ SAF/IA, along with DSAA, will become the coordinating agency as they build position papers on the proposed sale.

In the DOS, the initial and policy review will be accomplished by the political-military regional desk. Specialized offices in the Treasury Department, Commerce, the CIA, the Office of Management and Budget, and others may all be requested for their input. Back in DOD, DSAA and SAF/IA will complete their assessment with help from Air Force Intelligence, Operations, and the JCS. In a case, such as the sale of an entire squadron of advance aircraft like the F-15E, the joint chiefs would also assess the regional stability implications of the sale with the unified commander and his staff.

Finally, a position paper would be sent to the assistant secretary of defense for ISA who will forward his opinion to the State Department. The State Department would then complete its review and either approve or disapprove the sale. If there is a politically sensitive arms transfer request, the secretary of state or the president himself may make the final decision.

Negotiation and development of the agreements. Once the transfer is approved, a letter of offer and acceptance (LOA) is developed. The service sales office, in this case SAF/IA, working with DSAA, will put together the LOA. This process can take anywhere from 60 to 180 days. Negotiations begin with the recipient country in order to determine what requirements will be in the agreement. Items discussed include type of weapon system, what equipment will come with the weapon system (very important for controlling technologies), and price (including procurement, handling, accounting, and delivery costs). Delivery dates, supply and support arrangements are also

discussed. Coproduction arrangements can be involved and make negotiations very complex.

Here is where another very significant control mechanism on military technologies takes place. When the US government allows the sale of an advanced weapon system such as the F-15E to a foreign nation, it is not selling its top-of-the-line fighter. It is not a full-up US combat-equipped aircraft but an export version.¹⁴ An export version of an aircraft is an aircraft that has limited combat capability in comparison to the version flown by the US military. The US will not sell or transfer any capability that has the potential to put our own forces at risk. Generally, this is done by limiting the flight or weapons delivery capability of the aircraft. Examples can include changes in computer software so an aircraft cannot maneuver as well as the US version (flight control tape change); or downgraded avionics that can reduce its capability to fly in weather, at night, or against certain threats.

Systems specifically close controlled are advanced radar hardware and software components, electronic warfare systems such as internal jamming pods or countermeasure dispensers and radar warning receivers that can detect enemy aircraft radar. An article in *Electronic Defense* states the control measures well, "EW (electronic warfare) technology is still tightly controlled by the US national security apparatus. Highest on the evolutionary ladder of military force multipliers, and in high demand in emerging military markets in the Middle East, Asia-Pacific and Latin America, EW systems are often the last products released from the US security web—if they are released at all."¹⁵

When they are released, it is because of another important feature that is negotiated into LOAs. Strong allies do receive some of the US's most advanced equipment, but they only receive equipment if it will be serviced by US support. For example, it is common for an FMS agreement to require that US government depot and intelligence support teams do the reprogramming of electronic warfare gear.¹⁶ The foreign nation is allowed to use the equipment, but the US controls it.

Also, logistics and supply (spare parts) support are controlled by the US so if the country becomes unfriendly those parts can be turned off. F-4 and F-14 sales to Iran in the 1970s are common examples held up as an FMS success. When the Shah was overthrown, there was great fear the US had made a mistake in selling fighters to his country. Although US intelligence agencies did not foresee the Shah's overthrow, the FMS system worked. Iran was dependent upon the US for spare parts and maintenance. The aircraft very quickly became noncombat capable. DOD controls, in this case, ensured the F-4s and F-14s were no threat. The DOS and the DOD do all they can to ensure advanced weapon system technologies are not transferred and that foreign nations receive the minimum defense requirement.

Performance of the agreement and feedback. Once the LOA is approved by both sides the transfer of arms can begin. In FMS cases, DSAA operates and manages the entire process for the recipient country. They become the agency of choice to contact if the contractor is not meeting his delivery schedule or the equipment is not working as advertised. DSAA ensures that formal plans are

worked out to set up logistical support for the transfer, as well as any training that may be included in the contract. DSAA works hand in hand with the contractor, the recipient nation, and any security assistance officers (ambassadors staff or military liaisons) that may be helping with the transfer. It is also responsible for collecting payment for the transfers. Records must document the number and types of items delivered under the various contracts. In the case of FMS, accounting procedures must ensure the US government is reimbursed for the work of procurement.

Feedback refers to information about the impact of a military transfer or service. The feedback can be lessons from delivery of the equipment or it may relate to the use of the equipment by the foreign government. Reports are required to monitor the condition and use of the equipment. In most cases, these reports are accomplished by the in-country security assistance officers either at the US Embassy or as part of the unified commander's staff. The reports are staffed by DSAA for release and notification to the State Department, Congress, and applicable DOD agencies. Intelligence assessments are included which ensures US equipment is continuously monitored for third party transfer. How a country uses US equipment may determine that country's likelihood of receiving future transfers.

Conclusion

This chapter provides an appreciation for the amount of control present in the arms transfer decision-making process. As decisions weave their way through the many actors in the DOS, DOD, and other governmental agencies, it is like a maze of control. This labyrinth of control is more than adequate to control the diffusion of military technologies.

Figure 5 shows the amount of bureaucracy in the arms transfer process. It is complex and has numerous and varied sources of inputs. Each directorate in each department, whether it be DOS or DOD, has its own regional or country intelligence desk to assess the requesting country's motives. This system has been built around the restraint of arms trade and the cold war maintenance of the US technology lead.

"The Labyrinth of Control"

***There is more than adequate control in
the US government to ensure that US
advanced military technologies are not
diffused around the world.***

Based upon the historical development and motivations of US foreign policy (chap. 2), the US has established stringent controls on arms sales to foreign powers (chap. 3). Given this, the following chapter addresses the possibility of

loosening these controls in order to instigate more foreign sales, which in turn would create a market to sustain the US DTIB.

Notes

1. The House Foreign Affairs Committee consistently asks for testimony from arms transfer experts regarding the sale of fighter aircraft to foreign nations. The testimony on 23 September 1992 by the assistant secretary of defense for International Security Affairs regarding the sale of the F-15E to Saudi Arabia was reprinted in *Defense Institute of Security Assistance Management (DISAM) Journal*, Winter 1992-1993, 49-52. There is an excellent discussion on the export version of the F-15E (F-15XP) and how it does not compare with the technology found in the F-15E Strike Eagle as flown by the US Air Force.

2. Dr Michael D. Salomone et al., *The Reluctant Supplier: U.S. Decisionmaking for Arms Sales* (Cambridge, Mass.: Oelgeschlager, Gunn & Hain Publishers, 1983), 85.

3. Ibid.

4. Until 1990, these agencies were called Assistant Secretary for Political-Military Affairs and Under Secretary of State for Security Assistance, Science and Technology, respectively.

5. Sumner Bensen, "Shaping Arms Export Policy," *Joint Force Quarterly*, Autumn/Winter 1994-1995, 84-91. This is an excellent article on the role of joint force commanders and their staffs in the arms export business.

6. Cases concerning advanced conventional weapons such as Stinger missiles, night vision goggles, precision guided munitions, standoff weapons, and missiles.

7. J-5 members on the joint chiefs, Pentagon, interview with author, 14 March 1995.

8. Ibid.

9. Interview with NDPC member who wished his name to be withheld.

10. The Arms Export Control Act (22 USC 2778(a) and 2794(7) provides that the president shall designate articles and services that shall be deemed to defense articles and defense services for the purposes of review and control. Such designations are made a part of a list titled the US Munitions List. This list is formed with consultation between the DOS, DOD, Commerce, and other agencies as may be appropriate. An article or service gets on the list if it (1) is specifically designed, developed, configured, adapted, or modified for military or intelligence application; (2) does not have significant civilian application; (3) does not have the performance capacity, technology and function equivalent to those of an article or services used for civil applications; or (4) has significant military or intelligence applicability such that control under section 38 of the AECA is necessary to further world peace and the security and foreign policy of the US.

11. Public Law 95-105, Arms Export Control Act (Foreign Relations Authorization Act, Fiscal Year 1978, H.R. 6689, 91 Stat. 844 to 846, sect. 47, approved 17 August 1977).

12. DOD 5105.38-M, sect. 140103(b), 1401-2. These totals are authorized by sect. 36(b)(1) of the Arms Export Control Act.

13. Also, this is the case where the NDPC may get involved. If the sale is pushed for at the highest of levels then an exception to the preapproved disclosure policy or baselines may be requested.

14. For an excellent discussion on export version of US F-15E aircraft, see "Sale of F-15 Aircraft to Saudi Arabia, Part II," Carl W. Ford, Jr., *DISAM Journal* (Winter 1992/1993), 50.

15. Zachary A. Lum, "Let the Walls Come Tumbling Down?" *Journal of Electronic Defense* 18, no. 3 (March 1995): 33-41.

16. Ibid., 34.

Chapter 4

Maintaining the DTIB with US Government Support

Although one normally would think of defense as an issue that should be considered in a closed domestic economic system, the facts indicate the contrary. The US DTIB is increasingly dependent on sales of military equipment abroad.

—Jacques S. Gansler
Affording Defense

The US government can preserve the DTIB by aggressively supporting US industry in the arms transfer process. Figure 6 demonstrates this paper's logic flow on why and how the US government can help maintain this base. The DTIB must be preserved. Arms transfers have and will continue to be an instrument of foreign policy. Controls in the arms transfer decision-making process must be liberalized to reflect current economic and security realities. With an awareness these assertions must be accomplished, the US government can help maintain the DTIB by aggressively supporting US industry in the arms transfer process.

Arms transfers continue to be an instrument of foreign policy based on US security interests. As chapter 2 suggested, US arms transfer policy has reflected the security interests of its governments for over 50 years. There is no reason to expect this will not continue. The Middle East and Korea continue to be of vital concern to the US security community and every effort will be made to enable regional stability to prevail in those parts of the world. Along with regional and world security issues, the evidence suggests US foreign policy reflect the importance of economic security and the DTIB.

The US is competing on a world stage for economic influence like it has never competed before. Aspiring economic leaders such as Japan and Germany are competing for market share at an unprecedented rate, and that competition extends into the worldwide arms market. While there is little threat of general or conventional war on a global scale, regional stability and balance is sought throughout the world. The US has taken the leadership role in this regard and is looked on as the military superpower with the military equipment of choice.

Exports of US weapons have great appeal and could grow for one simple reason. The Gulf War showed the effectiveness of US manufactured weapon systems. Cable News Network scenes from the war were transmitted to the world demonstrating the technological achievements of laser guided bombs

from stealthy and nonstealthy aircraft alike. Weapon systems, such as the F-16, F-15E, F-117, and the airborne warning and control system received rave reviews.

Although the US has the equipment of choice, many nations are unable to acquire it. US controls make it difficult for most nations to even be allowed to purchase US weapon systems. These controls must be reduced so that the US DTIB can remain strong. The author is not suggesting the US sell everything to everyone, but controls can be liberalized and the process streamlined, especially for very close allies.

The decision-making process of the president, Department of State, DOD, and other governmental agencies is smothering the capability of US industry to respond to foreign nations' requests for arms. There are so many rules, regulations, and baselines to consider, as well as political restraints, that many nations are going elsewhere for their arms. For example, when Congress refused to approve a 1986 F-15 deal with the Saudis, the Gulf nation turned to the Tornado fighter built by a European consortium led by

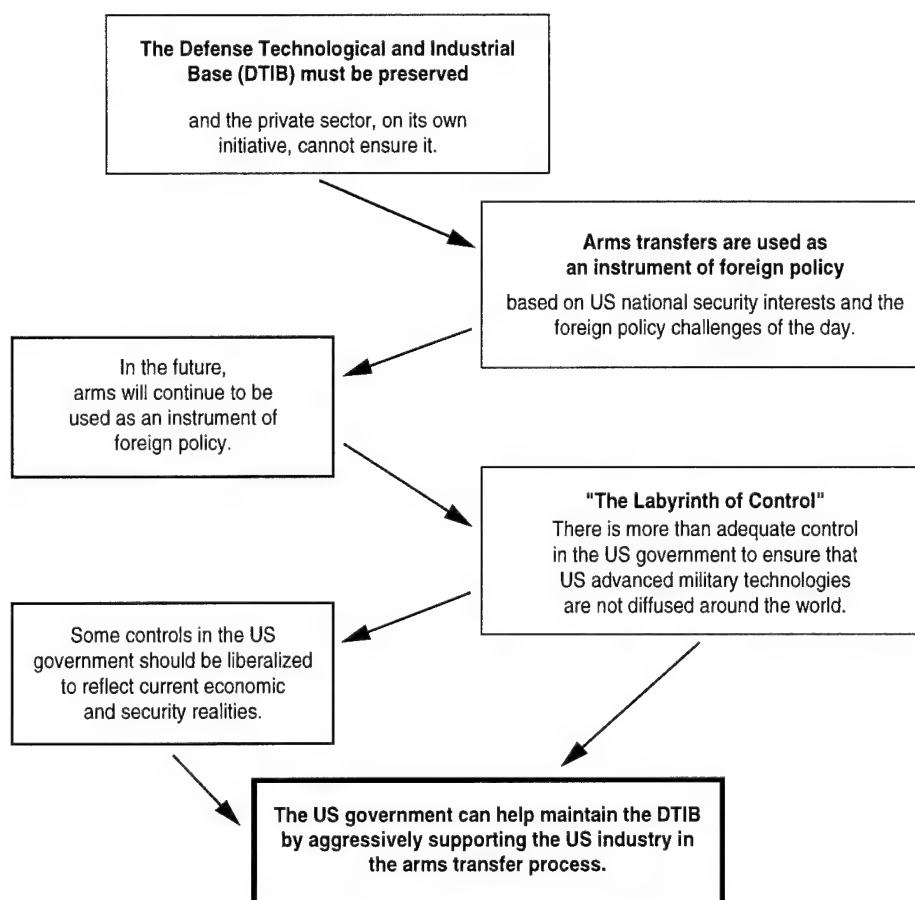


Figure 6. Arms Transfers Can Help Preserve the DTIB in the Future

British Aerospace, in a deal that earned an estimated \$17 billion.¹ Do we want to lose sales, hurt our DTIB, lose a foreign market and important diplomatic ties, over politics, or rules and regulations, just to have the country buy from someone else? Isn't it better for the US to know what a foreign government has purchased because they bought it from the US? I think the answers to these questions are obvious.

The US government must find ways to help US defense industries market their products overseas. The Clinton administration has taken one step toward liberalizing export controls but much more can be done. Lynn Davis, President Clinton's under secretary of state for International Security Affairs, outlined the Clinton administration's export control policy. It is an attempt to "liberalize export controls and redesign export control procedures and processes in light of the dramatic changes in the world, and keep controls focused on weapons of mass destruction, missiles, advanced conventional arms, and other threatening military capabilities."² The effect of this new policy is significant for the commercial computer industry. In fact, by simply raising control thresholds for the export of computers and supercomputers, the administration decontrolled several billion dollars worth of exports. The streamlining is continuing in the dual-use technology area.³

Today's dual-use export control system is quite different from even a few years ago. In the mid-1980s the US government reviewed about 120,000 licenses per year. With reduced controls in 1993, only 27,000 licenses were reviewed. By 1994, with further reductions in the Commerce Department's export procedures, only 16,000 licenses required review.⁴ If this type of streamlining could be applied to the DOD, arms transfers could be allowed quicker and to more countries. Sadly, it has yet to be applied or have an effect on arms transfer procedures.

Another area where the US government should take a proactive role for arms transfers is in the negotiation for offsets and coproduction development agreements.

Offsets are defined as an entire range of industrial and commercial compensation practices provided to foreign governments and firms as inducements or conditions for the purchase of military goods and services.⁵

Foreign governments often require or request offsets to reduce the financial impact of their purchases. Offsets are considered an important competitive tool for US contractors, particularly when selling to countries making purchases with their national funds and when foreign competition is involved.⁶

Coproduction is a US government program implemented either by a government-to-government arrangement or through specific licensing arrangements by designated commercial firms. It enables foreign entities to acquire the know-how to manufacture or assemble, repair, maintain, and operate all or part of a specific defense item or weapon, communication, or support system.⁷

While offsets and coproduction agreements can help increase the US global arms market, offsets are often criticized as a form of bribery. They are characterized as illegal, immoral, or the shady side of a military sale. They

are not. The US needs to realize, instead, that the international arms market is competitive and that offsets are nothing more than a way of engaging in a reciprocal trade agreement. Unfortunately, when an international customer comes to the US government with its list of requirements including offsets, it immediately learns that the United States does not like nor wishes to accept responsibility to implement the offset or incur its costs.

The most common offset arrangement the US government participates in is to those countries that receive the most FMF. Recall from chapter 2, the US makes grants to some countries by waiving FMF. For example, since 1987, Israel and Egypt have received FMF grants valued at \$1.8 billion and \$1.3 billion each year, respectively. Additionally, since 1991, Israel has been authorized to spend \$475 million of that grant within their own country (the offset).⁸ While offsets are a questionable use of US FMF funds,⁹ they are a method to ensure American companies get introduced to the foreign market. It has been common for a company, once working within a country, to remain the company of choice. Therefore, future diplomatic and business ties are improved with the first sale. The US government needs to learn how to help American industry in the offset arena.

Coproduction agreements are being requested at an increased rate as countries no longer wish to remain dependent on any one supplier. They would like to increase their own industrial base and technological know-how in at least a small way to help out their domestic situations. These agreements, while having a few downsides for American industry, again offer access to a foreign market that otherwise may not be there. Many countries cannot afford to pay out of their national treasuries for weapon systems and would not purchase from the US if a coproduction agreement was not arranged. The US government can help US industry by supporting them in coproduction agreements.

Coproduction agreements can have a downside—*technology transfer*. In order to ensure advanced military technological processes are not transferred to foreign nations, the US government has to understand the difference between a *technological product* and a *technological process*. It then must recognize that the main goal is to protect advanced technological processes. If a foreign nation acquires a *product* that is advanced without the know-how to build or fix that product, then very little, if any, technology is actually transferred. If, however, the US allows a country to build a sophisticated product then we have taught and transferred a technological process. This is where US controls should remain in place, not on the sale of products.

Principal objectives for the industrial base were published in a 1992 *Defense Industrial Base* white paper. One called for the DOD to “establish an industrial base oversight process that will identify critical *processes* or capabilities”; and the “potential loss of these critical *processes*.”¹⁰ This is exactly the type of control necessary in the arms transfer business, not the system currently focused on products. If the US went into every sale and coproduction negotiation understanding this difference, the underlying fear prevalent in arms sales to foreign nations would be greatly diminished.

Another important item to consider is the status of US major weapon system production lines. Production lines for nearly all fighter aircraft, the F-14, F-15, F-18 and all tanks, the M-1 and the Bradley fighting vehicle, will be ending in the near future. Follow-on systems are five or more years off because of stockpiled weapon systems and the lack of threat.¹¹ The DOD, however, is beginning to recognize the importance of US production lines, their inherent technological processes, and has begun taking steps to preserve this portion of the DTIB.

Recent sales of F-15Es to Saudi Arabia and Israel are excellent examples of this type of preservation. The McDonnell Douglas F-15 was about to go out of production until sales were made to Saudi in 1992. As a part of this sale, Frank Wisner, under secretary of state for International Security Affairs, recognized the value of this sale as an important way of preserving the US DTIB. He stated, ". . . the ability to maintain this kind of industrial base through prudent arms sales enables (the US) to continue producing the best defense items in the world."¹²

In 1995, five major weapon systems (F-15, F-16, Patriot, Apache, and Blackhawk) will be sold almost entirely to foreign countries.¹³ The only thing keeping those lines open and preserving manufacturing *processes* is foreign military sales. These sales, therefore, are and will continue to be vital to the health of the DTIB. Total 1995 FMS dollars will reach nearly \$15 billion.¹⁴ This represents a fairly large share of US arms production since the US is buying only very small numbers of major weapon systems. If the sale of 150 F-16s to Taiwan and the sale of F-15s to Saudi Arabia and Israel had not occurred, it is very likely these lines would have closed and there would have been no reconstitution capability for fighter-type aircraft if needed in time of crisis.

There must be some short-term surge capability, medium-term expansion capability, and long-term reconstitution capability in the US DTIB. These processes cannot be started up over night. If production lines are closed, important defense workers lose their jobs, subcontractors move into different businesses, and many suppliers may go out of business never to be found in time of need. This fact is perhaps more important than the prime contractor line itself. For example, it is projected the F-16 will suffer from spare parts shortages for the foreseeable future.¹⁵ If the US DTIB is unable to provide adequate spares and supplies to our aircraft in the inventory, the US will have a very difficult time fighting any prolonged conflict. The US government must support US industry in this endeavor.

The US DTIB is in a very perilous position and requires aggressive support from the US government. The future security of the US, both economically and militarily, could depend on it. At present, the US government is doing little to preserve the DTIB. Over the past five years procurement dollars are way down and future defense budgets promise more in the way of cuts. The challenge is to preserve the DTIB without having to continue the purchase of arms for US arsenals like in the past.

This challenge can be met by understanding the importance of the DTIB and supporting its preservation. I recommend the US government maintain the DTIB by aggressively supporting US industry in arms sales around the world. While I do not wish for *technological processes* to end up in the wrong hands, I recommend the US government liberalize or streamline its "labyrinth of controls" on the arms transfer decision-making process.

Notes

1. Larry Grossman, "US Weapons Merchants Pin Hopes on Foreign Markets," *Government Executive*, August 1992, 116-18.
2. Lynn E. Davis, "Export Controls and Non-proliferation Regimes in the Post-Cold War World," *DISAM Journal*, Spring 1994, 65-69.
3. Dual-use technologies are civilian technologies, like advanced computers, machine tools, and chemical plants that can or have the potential to be used to develop military capabilities.
4. Davis, 68.
5. Russell D. Feingold, "Military Exports: Concerns over Offsets Generated with U.S. Foreign Military Financing Program Funds," GAO Report to Congress, June 1994, 1. (Israel, Egypt, Greece, and Turkey are the largest recipients of the FMF program. Since fiscal year 1975, the US has provided over \$60.1 billion in FMF funding consisting of grants and loans to these countries).
6. Ibid.
7. National Security and International Affairs Division, "Technology Transfer: Japanese Firms Involved in F-15 Coproduction and Civil Aircraft Programs," GAO Report to Congress, June 1992, 1.
8. Feingold, 4.
9. Ibid., 9.
10. Department of Defense publication, "The Changing Defense Industrial Base," *DISAM Journal*, Fall 1992, 17.
11. David J. Louscher, "The Contribution of Arms Exports to the U.S. Economy and Balance of Trade," *Arms Transfers, Export Control, and Dual-Use Technology in the Aftermath of the Kuwait War*, from a AAAS Congressional Seminar, Washington, D.C., 17 April 1991.
12. Frank Wisner, "Sale of F-15 Aircraft to Saudi Arabia, Part I," *DISAM Journal*, Winter 1992/1993, 47.
13. Jeffrey R. Smith, "Administration Battles Over Arms Sales Policy," *Washington Post*, 16 November 1994, C-1.
14. Department of Defense, *Defense Security Assistance Agency: Fiscal Year Series* (Washington, D.C.: FMS Control & Reports Division), 30 September 1993.
15. Maj Gen William Hallin, presentation to the Air War College, Robins Air Logistics Center, Georgia, 22 November 1994. (Speaker quoted from an unpublished paper by Lt Col Douglas Goebel on preserving the defense industrial base).

Glossary

AECA	Arms Export Control Act
AF/IN	Air Force Intelligence
AF/XO	Air Force Operations Directorate
AWACS	Airborne Warning and Control System
CNO	Chief of Naval Operations
CSAF	Chief of Staff of the Air Force
DIA	Defense Intelligence Agency
DRSA	Defense Relations and Security Assistance
DSAA	Defense Security Assistance Agency
DTIB	Defense Technological and Industrial Base
DTSA	Defense Technology Security Administration
EXMASF	Excess Military Assistance Service Fund
FMF	Foreign Military Financing
FMS	Foreign Military Sales
IMET	International Military Education and Training
IPO	International Programs Office (Navy)
ISA	International Security Affairs (DOD)
ITAR	International Traffic in Arms Regulation
JSOP	Joint Strategic Operations Plan
LOA	Letter of Offer and Acceptance
MASF	Military Assistance Service Fund
MDE	Major Defense Equipment
MRC	Major Regional Conflict or Contingency
NDPC	National Disclosure Policy Committee
SAF/IA	Secretary of the Air Force/International Affairs
SAO	Security Assistance Office
USASAC	United States Army Security Assistance Command

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